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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,010	01/17/2002	Saket Chadda	SFI 1017	9154

27782 7590 12/03/2004

SPEEDFAM-IPEC CORPORATION
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EXAMINER	
RACHUBA, MAURINA T	
ART UNIT	**PAPER NUMBER**
3723	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/052,010	CHADDA ET AL.	
	Examiner	Art Unit	
	M Rachuba	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *6,7,20-27 and 38-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 8-19 and 28-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The affidavits filed on 17 September 2004 under 37 CFR 1.131 has been considered but are ineffective to overcome the Tsai et al reference.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Tsai et al reference. The evidence provided appears to indicate that other than the named inventors made the invention. On the first page of the Invention Record, inventors Basak and Murella are listed. Below this listing, Names 3 and 4, Joe Hernandez and Fred Mitchel are listed. Neither Hernandez or Mitchel are listed as inventors of record in the pending application. Applicants may file further affidavits showing that Hernandez or Mitchel did not contribute to the claimed invention, or may petition to change inventorship.

Election/Restrictions

2. Applicant's election without traverse of species 2 in Paper No. 14 is acknowledged. Claims 6, 7, 20-27 and 38-46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(f) he did not himself invent the subject matter sought to be patented.

4. Claims 1-4, 8-12, 14-16, 18, and 28-32, and 34-37 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tsai et al, 2003/0022501 (US Priority date of July 25, 2001). Applicants' affidavits do not overcome the rejection under 35 USC 102(e). Please refer to the discussion of the affidavits under 37 CFR 1.131 above.

2. Claims 1-5, 8-19, and 28-37 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. Please refer to the discussion of the affidavits under 37 CFR 1.131 above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 5, 13, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al, '501. '501 does not disclose the polishing step occurring at a temperature between 10 degrees C. (approximately 50 degrees F.) and 30 degrees C. (approximately 86 degrees F.). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided '501 with a temperature range as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. The examiner considers between 50 degrees F. and 86 degrees F. to be ambient room temperature. Barring evidence of criticality to the claimed range, one of ordinary skill would have considered it obvious to conduct the method at normal room temperature ranges. Further, '501 does not disclose that the pretreatment occurs for approximately on to twenty seconds, but does disclose that the first polishing step (pretreatment) can occur for the amount of time required to remove the material desired. It would have been obvious to one of ordinary skill to have provided '501 with a process step of the claimed time interval, to remove the amount of material desired, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

3. Applicant's arguments filed 17 September 2004 have been fully considered but they are not persuasive. Applicant argues that '501 does not disclose that the metallized surface has a polish-resistant film thereon. The examiner disagrees. Applicant discloses that the polish-resistant film is formed on the metal layer by a variety of different processes including oxidation or temperature, but has not disclosed or claimed a specific film composition (i.e. copper oxide). '501 discloses, in a similar device, that the metal layer of copper is polish-resistant (difficult to etch) and that abrasive planarization removes the metal. '501 discloses a two or three step process which in a first step (pre-treatment) removes the polish-resistant copper layer, and in a subsequent step removes any residual copper material. Please refer to [0007]-[0009] and [0049]-[0078]. It is the examiner's position that, without further limitations to the types of material being removed, '501 clearly anticipated the claimed invention.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M Rachuba whose telephone number is **(571) 272-4493.** The examiner can normally be reached on Monday-Thursday from 8:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail, can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Rachuba
Primary Patent Examiner

11/30/04